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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,013	06/07/2005	Chiori Mochizuki	03500.017899	6871

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NEW YORK, NY 10112

EXAMINER

CRUZ, LESLIE PILAR

ART UNIT	PAPER NUMBER
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2826

MAIL DATE	DELIVERY MODE
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01/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,013

Applicant(s)

MOCHIZUKI ET AL.

Examiner

Leslie P. Cruz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.



Minhloan Tran
Primary Examiner
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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :06/07/2005, 12/29/2005,09/10/2007.

DETAILED ACTION

Election/Restrictions

Applicant's election of Species I, claims 1-12 and 20, in the reply filed on 10 September 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Information Disclosure Statement

The Information Disclosure Statement(s) filed on 07 June 2005, 29 December 2005 and 10 September 2007 has been considered.

Oath/Declaration

The oath or declaration filed on 07 June 2005 is acceptable.

Drawings

Figures 10 and 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 9 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. (US 2001/0019130 A1).

With respect to claim 1, Yamazaki et al. (Figs. 1-6C) discloses a photoelectric converter comprising a plurality of pixel [region A and region B, paragraphs 0033-0036] each comprising a sensor element [420, 421 and 422 combined] for converting incident light into an electrical signal, and a thin film transistor [TFT of region B] connected to the sensor element, wherein an electrode [420] of the sensor element connected [via 419] to the thin film transistor is disposed above the thin film transistor, and the thin film transistor has a top gate type structure in which a semiconductor layer [414], a gate insulating layer [406], and a gate electrode layer [408] are laminated successively on a substrate [400].

With respect to claim 7, Yamazaki et al. (Figs. 1-6C) discloses a radiation image pickup device comprising a plurality of pixels [region A and region B, paragraphs 0033-0036] each comprising a sensor element [420, 421 and 422 combined] for converting

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radiation into an electrical signal, and a thin film transistor [TFT of region B] connected to the sensor element, wherein an electrode [420] of the sensor element connected to the thin film transistor is disposed above the thin film transistor, and the thin film transistor has a top gate structure in which a semiconductor layer [414], a gate insulating layer [406], and a gate electrode layer [408] are laminated successively on a substrate.

With respect to claim 9, Yamazaki et al. discloses a radiation image pickup device according to claim 7. Yamazaki et al. (Fig. 1) further discloses a storage capacitor [103] is connected to the sensor element.

With respect to claim 20, Yamazaki et al. discloses a radiation image pickup system comprising: the radiation image pickup device according to claim 7. Yamazaki et al. (Figs. 1-4) further discloses processing means [region B] for generating an image as an object for image pickup on the basis of electrical signals obtained from the radiation image pickup device; and display means [region A] for displaying the image generated by the processing means [paragraphs 0007-0009 and 0034].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 8, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. in view of Ohtani (US 6,277,679 B1).

With respect to claim 2, Yamazaki et al. discloses a photoelectric converter according to claim 1. Yamazaki does not specify the thin film transistors are constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring. However, Ohtani (Fig. 14) teaches it is well known for thin film transistors [3502] to be constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring [column 15 line 60 thru column 16 line 7]. Ohtani teaches it is beneficial for thin film transistors to be constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring in order to reduce the off-current to pass therethrough. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the thin film transistors of Yamazaki to be constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring, such as taught by Ohtani, in order to reduce the off-current to pass therethrough

With respect to claim 3, Yamazaki et al. in view of Ohtani discloses a photoelectric converter according to claim 2. Yamazaki et al. (Fig. 1) discloses the plurality of thin film transistors comprise: a plurality of transferring thin film transistors [104] for transferring electrical signals from the sensor elements, respectively; and a plurality of resetting thin film transistors [108] for resetting the sensor elements, respectively.

With respect to claim 4, Yamazaki et al. in view of Ohtani discloses a photoelectric converter according to claim 2. Yamazaki et al. (Fig. 1) further discloses the plurality of thin film transistors comprise: a plurality of amplifying thin film transistors [107] for receiving as their inputs electrical signals from the sensor elements, respectively; a plurality of transferring thin film [104] transistors for outputting the electrical signals, respectively; and a plurality of resetting thin film transistors [108] for resetting the sensor elements, respectively.

With respect to claim 5, Yamazaki et al. in view of Ohtani discloses a photoelectric converter according to claim 2. Yamazaki et al. (Fig. 4) further discloses each of channel regions [414] of the plurality of thin film transistors is wider than each of gate electrodes of the plurality of thin film transistors.

With respect to claim 8, Yamazaki et al. discloses a radiation image pickup device according to claim 7. Yamazaki does not specify the thin film transistors are constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring. However, Ohtani (Fig. 14) teaches it is well known for thin film transistors [3502] to be constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring [column 15 line 60 thru column 16 line 7]. Ohtani teaches it is beneficial for thin film transistors to be constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring in order to reduce the off-current to pass therethrough. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the thin film

transistors of Yamazaki to be constituted by a plurality of thin film transistors which are connected in series with one another and which use a same gate wiring, such as taught by Ohtani, in order to reduce the off-current to pass therethrough

With respect to claim 10, Yamazaki et al. in view of Ohtani discloses a radiation image pickup device according to claim 8. Yamazaki et al. (Figs. 1, 4) further discloses the plurality of thin film transistors comprise: a plurality of transferring thin film transistors [104] for transferring electrical signals from the sensor elements, respectively; and a plurality of resetting thin film transistors [108] for resetting the sensor elements, respectively.

With respect to claim 11, Yamazaki et al. in view of Ohtani discloses a radiation image pickup device according to claim 8. Yamazaki et al. (Fig. 1) further discloses the plurality of thin film transistors comprise: a plurality of amplifying thin film transistors [107] for receiving as their inputs electrical signals from the sensor elements, respectively; a plurality of transferring thin film transistors [104] for outputting the electrically signals, respectively; and a plurality of resetting thin film transistors [108] for resetting the sensor elements, respectively.

With respect to claim 12, Yamazaki et al. in view of Ohtani discloses a radiation image pickup device according to claim 8. Yamazaki et al. (Fig. 4) further discloses each of channel regions [414] of the plurality of thin film transistors is wider than each of gate electrodes of the plurality of thin film transistors.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. in view of Aggas et al (US 6,020,590).

With respect to claim 6, Yamazaki et al. discloses a radiation pickup device, comprising: the photoelectric converter as claimed in claim 1. Yamazaki et al. does not disclose a conversion unit provided on a light incidence side of the photoelectric converter for converting radiation into light. However, Aggas et al. (Fig. 6) teaches it is well known for a conversion unit [120] to be provided on a light incidence side of a photoelectric converter [110] for converting radiation into light. Aggas et al. teaches it would be beneficial to include a conversion unit provided on a light incidence side of a photoelectric converter for converting radiation into light in order to capture a radiographic image [column 6 lines 11-14]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the radiation pickup device of Yamazaki et al. to include a conversion unit provided on a light incidence side of the photoelectric converter for converting radiation into light, such as taught by Aggas et al., in order to adopt such a structure that a display semiconductor device for displaying a radiographic image and a light receiving semiconductor device for capturing a radiographic image are provided on the same substrate.

Telephone/Fax Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie P. Cruz whose telephone number is 571-272-8599. The examiner can normally be reached on Monday-Friday 9:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue A. Purvis can be reached on 571-272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



lpc

Leslie Pilar Cruz
Examiner
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